STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

ORIGINAL

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

CASE NO. 14295

APPLICATION OF KOCH EXPLORATION COMPANY, LLC; CONOCO PHILLIPS COMPANY; BURLINGTON RESOURCES OIL AND GAS COMPANY, LP; AND ENERGEN RESOURCES CORPORATION FOR AN INCREASED DENSITY PILOT PROJECT IN THE BASIN-FRUITLAND COAL GAS POOL, SAN JUAN COUNTY, NEW MEXICO.

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REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

April 16, 2009
Santa Fe, New Mexico

BEFORE: DAVID BROOKS: Hearing Examiner
TERRY WARNELL: Technical Advisor
RICHARD EZEANYIM: Technical Advisor

This matter came for hearing before the New Mexico Oil Conservation Division, David Brooks Hearing Examiner, on April 16, 2009 at the New Mexico Energy, Minerals and Natural Resources Department, 1220 South St. Francis Drive, Room 102, Santa Fe, New Mexico.

REPORTED BY: Peggy A. Sedillo, NM CCR NO. 88
Paul Baca Court Reporters
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I N D E X

A P P E A R A N C E S

FOR THE APPLICANT: EARL DEBRINE, ESQ.
Modrall Sperling, PA
P. O. Box 2168
Albuquerque, NM 87102

HEARING EXAMINER: We'll call Case No. 14295, the Application of Koch Exploration Company, LLC, Conoco Phillips Company, Burlington Resources Oil and Gas Company, LP, and Energen Resources Corporation for an increased density pilot project in the Basin-Fruitland Coal Gas Pool, San Juan County, New Mexico.

Call for appearances.

MR. DEBRINE: Mr. Examiner, Earl DeBrine with the Modrall Sperling Firm for the applicants.

HEARING EXAMINER: And you have how many witnesses?

MR. BRUCE: We have four witnesses today.

HEARING EXAMINER: Thank you. Other appearances? Very good. Would the witnesses please stand and identify themselves for the record?

MR. CONNOR: My name is Morgan Connor.

MR. BAACK: Glenn Baack.

MR. ALEXANDER: Alan Alexander.

MR. WRIGHT: Bob Wright.

HEARING EXAMINER: Thank you. Would you please swear the witnesses?

(Note: All witnesses were placed under oath. by the court reporter.)

HEARING EXAMINER: Do you have any statement to make before you start with your witnesses?

MR. DEBRINE: No, Mr. Examiner. In the interest of judicial economy, we're just going to start right in and hopefully get done.

HEARING EXAMINER: Very good. You may call your first witness.

MORGAN CONNOR,

the witness herein after first being duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. DEBRINE:

Q. Please state your name.

A. Morgan Connor.

Q. Mr. Connor, where do you live and by whom are you employed?

A. I live in Denver, Colorado, I'm employed by Koch Exploration Company, LLC, as its land manager.

Q. Have you previously testified before the Division as a landman?

A. Yes, I have.

Q. And were your credentials and testimony accepted by the Division in that matter?

A. Yes, they were.

MR. DEBRINE: We would ask that the Examiner accept Mr. Connor as an expert in petroleum land matters.

HEARING EXAMINER: He is so qualified.

Q. Would you give the Examiner a brief summary of what Koch, Burlington, Energen, and Conoco are trying to accomplish by this application?

A. If we can go back for one second, I just want to point out that the four companies that are basically the parties before you today, we're spearheading the presentation as Koch Exploration.

Alan Alexander will be speaking on behalf of Conoco Phillips and Burlington Resources. We also have Energen Resources, which has joined us in our application, however, has not put in an appearance for today but has sent a letter of support.

Our Fruitland Coal increased density pilot project is in Township 29 North, Range 9 West, San Juan County, New Mexico.

And basically what we're doing here today is, the four companies, Koch Exploration Company, Conoco Phillips Company, Burlington Resources Oil and Gas Company, LP, and Energen Resources Corporation as the applicants, are seeking to authorize to establish the Fruitland Coal pilot program to drill up to eight increased density wells.

The purpose of the pilot is to test the merits of increased density in portions of the low productivity area.

During the implementation of our pilot program, the applicants will acquire valuable data to better define the Fruitland Coal reservoir, including layer pressure, pressure data, better definition of coal properties from additional density logs, incremental recovery estimates and degree of reservoir acceleration utilizing reservoir stimulation.

MR. DEBRINE: And Mr. Examiner, in front of you is a notebook of exhibits with both the technical exhibits and the summary exhibits that are going to be on the Powerpoint as well. It's the black notebook to your left. I don't know if it's easier to look at that or strain your eyes looking at the screen.

HEARING EXAMINER: Actually, I can see the Powerpoint because I don't need my glasses to see that.

THE WITNESS: We do have some things that are in your exhibit book that are not on the Powerpoint. I'll try to point those out to you.

HEARING EXAMINER: If you'd call those to my attention when you get to them.

THE WITNESS: Yes, sir.

A. Just to give you a little historical background, the special rules and regulations for Basin-Fruitland Coal Pool low productivity area were adopted in October 2002.

Alan Alexander is going to go a little more in

depth regarding the history of spacing and Fruitland Coal high productivity and low productivity areas.

But the net effect of the rules as they currently exist is four wells per section, or two wells per standup -- typically per standup 320.

HEARING EXAMINER: Right. Actually, I was the legal examiner for the last hearing that resulted in the present Fruitland Coal spacing order. So I'm familiar with the existing rules.

THE WITNESS: Anything you want us to skip, just let us know in the interest of time.

A. The next slide will show you the area that we're going to be covering. Basically, we have two half sections and full sections that are part of our pilot area.

And the map here shows the buffered area around our pilot area. So, we're proposing to drill one well in the two quarter sections that I'm pointing to now in Sections 20 and 21, four wells in the west half of Section 28 and the east half of Section 29, and then the northwest quarter of Section 33, and the southwest quarter of Section 32.

We did notice everybody in the buffer area as we're required to regarding this hearing. We have West Largo who is here in the blue. In the yellow is Koch

Exploration. In the light green is Energen. And in the maroon-orangish color is going to be Conoco Phillips, or is going to be Burlington Resources.

One reason I brought up the area in blue, is I would like you to know that recently we had a meeting in front of the local representatives of the NMOCD and the BLM down in Aztec, New Mexico.

Burlington Resources, Conoco Phillips, Energen and ourselves all had representatives there, as did West Largo, as did the BLM NMOCD local representatives.

And we have letters to read into the testimony from them and they're part of your package. If you can go on to the next slide.

This is one thing that we discussed in our meeting with the NMOCD and the BLM is that we'll do everything that we can to minimize surface damages for this pilot.

The locations that we've chosen which are on this map, basically we presented to the BLM and the NMOCD without any objection. We're tying to in a couple of instances drill wells that are going to be deviated, just to drill them from an existing pad.

We're also looking to drill adjacent roads, and we're also looking to make as small a footprint as possible by taking advantage of existing locations.

We've had representatives of the BLM out to the majority of these locations and they say that they will work within these confines. Plus, we had a verbal from the BLM that these locations are acceptable to them for this pilot program.

Q. Mr. Connor, could you turn to Exhibits 4 and 5?

A. Okay. Exhibit 4 is a letter of support that we received from Steve Henke with the BLM. It was addressed to Mr. Fesmire. And that's in your package. I don't need to read that into the --

Q. No, that's fine.

A. Okay. The next letter is a letter of support, Exhibit 5, from Energen stating that even though they're not making testimony today, they're fully supporting this application and would recommend its approval.

Q. Mr. Connor, did you receive any other statements of support that aren't included in the --

A. Yes, I did. We received an e-mail from Steve Hayden with the NMOCD.

THE WITNESS: As a matter of fact, Mr. Brooks, it was addressed to yourself.

HEARING EXAMINER: Yes, it was. I received it also.

THE WITNESS: Would you like me to read it into the testimony or do you have a copy?

HEARING EXAMINER: I have a copy of the letter. We will just make it a part of the record.

Q. What was the date of the e-mail?

A. The date of the e-mail was April 14th. And it starts off as --

HEARING EXAMINER: It should be here.

Q. I believe, Mr. Connor, you can just read the contents of the e-mail into the record.

A. Dated on March 31, 2009.

"NMOCD Aztec hosted a meeting with representatives from Koch Exploration, Conoco Phillips Company, Burlington Resources, Energen Resources, West Largo Corporation, the BLM Farmington field office petroleum management team.

"The applicants presented their proposal for a limited infill pilot test in the Basin Fruitland Coal Gas Pool.

"The evidence presented indicates that there is no interaction between parent and present infill wells and that EUR for the pool in the area may be increased by further infill.

"We have no objection to this application."

Steve Hayden, telephone number.

HEARING EXAMINER: Okay, I found this while you were reading it into the record. So I'll offer it too, and we can make it Exhibit 5-A.

MR. DEBRINE: Mr. Examiner, we would tender Exhibits 4 and 5 into evidence.

HEARING EXAMINER: Exhibits 4 and 5 are admitted.

A. Again, just to show you, this is our pilot area, this is our buffer area. You can see that this well will be a directional well.

HEARING EXAMINER: Okay, for the benefit of making it clear on the record, on Exhibit 2, the pilot area is outlined in a black dashed line?

THE WITNESS: Yes, sir.

HEARING EXAMINER: And the buffer area is outlined in the solid red line?

THE WITNESS: Yes, sir.

HEARING EXAMINER: Thank you.

A. I don't know how much detail you would like me to give, but --

Q. Just orient the Examiner with regard to the general location of the project.

A. Again, the general location of the project here, in Sections 20 and 21, in Sections 28 and 29, and in

Sections 32 and 33, the one thing that we're showing in this that you might have a little trouble seeing on the exhibits that we printed out and handed out is the 660 foot buffer.

All of our locations with the bottom hole location are going to be legal locations taking into account the 660 setback.

HEARING EXAMINER: From the outer boundary of the pilot project?

THE WITNESS: Well, yes, sir, from the unit boundaries. This location that I'm pointing to now is the east half of Section 20, will be 660 feet from the half section line of Section 20 to be at a legal location.

HEARING EXAMINER: Okay.

THE WITNESS: Is that correct.

HEARING EXAMINER: Yeah.

Q. Have you prepared an exhibit that shows the footages of the proposed well?

A. Yes, we have. If you'll turn to the next page in Exhibit 7 in your package, what we're showing here is the eight proposed infill wells, their section location, the company that would be responsible for drilling those wells, the distance from the parent wells, their surface location, and in three cases, their bottom hole location where we're going to be drilling a proposed deviation.

We have the estimated lat/long locations of both the surface and the bottom hole. We also have the directional distance at the lateral. Whether it's a shared pad is indicated in the third to the last column. Whether it's adjacent to roads, and again, whether it's a deviated hole or an irregular location as indicated in the far right-hand column.

These are estimates. We have not surveyed all the locations. But as I said, the majority of which we've been out there, our field representatives have gone out there with BLM representatives to try to mitigate the issues of surface to serve for these locations.

Q. Mr. Connor, were Exhibits 1, 2, 3, 6 and 7 prepared by you or under your supervision?

A. Yes, they were.

MR. DEBRINE: We would move the admission of those exhibits, Mr. Examiner.

HEARING EXAMINER: Okay, 1 through 7 are admitted.

MR. DEBRINE: No further questions.

HEARING EXAMINER: Okay. I don't believe I have any questions. Do you have any questions, Mr. Warnell?

MR. WARNELL: No questions.

HEARING EXAMINER: Very good. The witness may stand down. You may call your next witness.

ALAN ALEXANDER,

the witness herein, after first being duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. DEBRINE:

Q. Would you state your name?

A. Alan Alexander.

Q. By whom are you employed, Mr. Alexander?

A. I'm employed by Burlington Resources, who is a subsidiary of Conoco Phillips, in Farmington, New Mexico.

Q. There has been a suggestion that you previously testified before the Division for the Commission in these type of matters; is that true?

A. That is correct.

Q. And have your credentials been accepted as an expert landman in those matters?

A. They have.

MR. DEBRINE: We would tender Mr. Alexander as an expert in petroleum land matters.

HEARING EXAMINER: He's so qualified.

Q. Mr. Alexander, could you just sort of set the background for this project in the context of the promulgation of the rules for this pool and what we're seeking to accomplish within the additional increased density project?

A. Yes. This first slide that we're looking at here is the actual pool boundaries that were established by the original order for the Basin Fruitland Coal Pool.

On it shown in blue are the actual pool outlines. I just want to note that it covers portions of Sandoval, San Juan and Rio Arriba County, New Mexico.

And just for location purposes, I've included in the green outlines all the federal units in the San Juan Basin.

On the next slide I wanted to just briefly review, I have in the solid area up in the northern part of the San Juan Basin, this is the high productivity area that is also defined by the series of orders in the Basin Fruitland Coal Pool.

Q. Just so the record is clear, by the next slide, you're referring to Exhibit 9 in the package?

A. Yes, that is correct. And for location purposes, I had put a red polygon where the project area is located in reference to the pool.

Also, we've included on there the Pictured Cliffs outcrop which is more generally used to define Fruitland Coal than the actual townships that were defined in the order for the Fruitland Coal.

On the next slide, which is Exhibit 10, I've given the Commission the series of orders that represent

the progress that we've made today in the Basin Fruitland Coal Pool. I just wanted to highlight of a few of the things since the Examiner is fully aware of pool rules.

HEARING EXAMINER: It looks like this exhibit was omitted from my notebook.

MR. DEBRINE: I've got an extra copy.

HEARING EXAMINER: Okay. Very good. You may continue.

A. We started forming the pool rules back in 1986. That's when the Basin Fruitland Coal Committee was originally formed. The committee has met off and on through the years, and we brought the application to the Division back in 1988 which established the temporary pool at that time under Division Order R8768.

Since that time, several milestones were obtained in the process. It was decided to develop the original pool on 320 acres, although if you read the original documents, there was some discussion that maybe the pool should have been developed on 160 acres. But the committee thought it was prudent to start with the larger spacing.

Since that time, various orders in the pool have -- we have worked the spacing down in two areas. In the high productivity area, currently the rules do allow an infill well in the high productivity area, but we'd have

to notice the offset operators and there is a chance for a hearing if anybody would care to protest in the high productivity area.

In the low productivity area, there is allowed an increased density well without a hearing and without any further work from the Division.

HEARING EXAMINER: I haven't observed that there have been any hearings under that. Is that the --

THE WITNESS: Not to my knowledge. We've drilled a few of the wells in the high productivity area. We did the notice work and nobody had protested to date. However, just a few wells have been drilled. I think it's acknowledged that in the high productivity area, 320 acre spacing is sufficient. So we drilled just a very few wells up there.

HEARING EXAMINER: Okay.

A. And as a matter of course, we've worked the setbacks in that pool and currently they're standing at 660 feet from the spacing unit boundary and 10 feet from any internal boundaries. That's the current status of the pool.

On the next slide -- and I'm not sure the -- this is probably just a continuation of Exhibit 10. So the next page of Exhibit 9 is simply a continuation of all the orders that were issued.

We're currently up to Order R8768F, and that was the final order that finally allowed a second well to be drilled in the high productivity area with the right for a hearing. So that's really the progression of the Basin Fruitland Coal orders to date.

Q. Mr. Alexander, does Burlington have experience with regard to other pilot projects that were designed to gather information for determining optimal well density for the Basin Fruitland Coal?

A. Yes, we have.

Q. And has the information generated by those projects been important to the coal bed methane gas committee in it's continued study of the reservoir to determine optimal spacing rules for the specific areas in zones within the pool?

A. Yes, that's correct.

Q. Do you have an opinion as to whether the information generated by this project will provide useful information to the committee, the BLM and the Division to determine the optimal spacing to effectively recover the gas resources present in the pool and prevent waste?

A. Yes. My opinion is that the information will be very helpful to the committee.

MR. DEBRINE: Mr. Examiner, we would ask that you admit Exhibits 8 through 10.

HEARING EXAMINER: Exhibits 8 through 10 are admitted.

MR. DEBRINE: No further questions.

HEARING EXAMINER: I have no questions. Do you have any questions, Mr. Warnell?

MR. WARNELL: If you were to go a few miles north up into Colorado, what's their spacing on the Basin Fruitland Coal?

THE WITNESS: Most of that spacing is now on 80 areas. There's a few pieces of land up there that are not, but nearly all of it is right adjacent to the Colorado/New Mexico border.

MR. WARNELL: Thank you. That's all.

HEARING EXAMINER: Okay. The witness may stand down. You may call your next witness.

GLENN BAACK,

the witness herein, after first being duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. DEBRINE:

Q. Please state your name.

A. Glen Baack.

Q. By whom are you employed, Mr. Baack?

A. Koch Exploration.

Q. And how long have you worked for Koch?

A. Just about 28 years.

Q. And all 28 years with Koch?

A. No, I worked with Texaco prior to that, about four years with Texaco. But 32 years total professional experience.

Q. And what is your experience and duties?

A. I work with our producing assets. I look after the development and drilling of some of these assets. I also participate in the acquisition and divestiture of certain assets.

I've worked with Koch Exploration in their San Juan Basin properties since approximately the mid '90s when we actually started developing the Fruitland Coal.

Q. Have you testify before the New Mexico Oil Conservation Division before?

A. Yes, I have.

Q. And were your credentials as a geologist accepted in those proceedings?

A. Yes.

MR. DEBRINE: We would tender Mr. Baack as an expert in petroleum geology.

HEARING EXAMINER: He's so qualified.

Q. Mr. Baack, did you prepare some exhibits to explain to the Examiner with regard to the geologic formation as it affects the pilot project that we're

presenting here today?

A. Yes.

Q. And could you refer to those exhibits and explain your analysis and the conclusions that you arrived at?

A. Yes, I will. I'll be giving a brief discussion on the geologic setting and structural picture of the Fruitland Coal and the increased density pilot area, and I'll speak from these bullet points and the hyphenations below them on the geologic summary and I'll add some detail to the discussion.

As you see, the first bullet point states that Fruitland Coal deposition in the pilot project area is highly variable and this is primarily due to the Fruitland depositional environment. We'll take a look at the first slide.

Q. You're referring to Exhibit 11?

A. This is Exhibit 11. And this slide shows the tectonic setting of the Fruitland Coal deposition in an ancestral San Juan Basin area during cretaceous times, which occurred about 70 to 80 million years ago.

What this slide shows is the Cretaceous Seaway. It's often called the Western Interior Seaway. This is a shallow sea that bisected the American continent at that time in a general north-south direction ranging from the

Gulf of Mexico all the way to the Arctic Ocean.

It's a shallow sea, approximately 300 feet average in depth, and resulted from a general structural subsidence of the -- what is now the Great Plains and Rocky Mountain areas, in addition, to a general rise in sea level due to a warmer climate during that period.

The San Juan Basin is identified on this map as the -- it's outlined in red along the western and lower red outline and identified by a text box. It's located along the western shoreline of the seaway. And it's in an area described on this map as Mires, M-i-r-e-s. That's the dark and light green shaded areas.

The definition of Mires is a swampy or marshy area. In effect, during the cretaceous times that's depicted by this map, the ancestral San Juan Basin area of the terrain in that area was a low-lying drainage area similar to what south Louisiana is now.

And over a period of several million years, the water level in the seaway receded and this resulted in a regressive sequence of deposition across the ancestral San Juan Basin area.

Peat layers from organic materials were deposited in shallow bays and lagoons, and the effects of heat and pressure from subsequent burial transformed those peat layers into the Fruitland coal units that we

recognize now.

Take a look at the next slide, and this slide helps demonstrate some of the disconnected nature of the coal -- or of some of the coal.

Q. You're referring to Exhibit 12 now?

A. Exhibit 12. This is a net coal thickness map and it's a -- the map is based on 10 foot contours. The map shows, as it was discussed earlier, the outline of -- The blue lines represent the outline of the increased density area. It's also depicted on this map as the 660 foot setbacks.

There's a cross section line depicted here from A to A prime that we'll discuss a bit later and includes the cross-section of three wells. The red gas well symbols represent Fruitland Coal coal bed methane wells, active Fruitland Coal methane wells. The red diamonds depict the proposed pilot well locations.

This map was derived from approximately 50 subsurface data points that had formation density well logs. The coal units were identified on those wells using a 2.0 grams per cc cutoff.

The coal thickness on this map within the increased density area ranges from a high of 80 feet in the northeast corner into a low of approximately 50 feet in the extreme southern portion of the increased density

pilot area.

Q. And are these characteristics fairly typical of what you might expect in a low productivity area?

A. Yes, it is.

Q. And is that one of the reasons that this pilot project area was selected?

A. That is correct. This is also consistent with the regional Fruitland Coal depositional model which is a highly dynamic peat slough environment rapid lateral facies changes that are bisected by a complex channel system.

Although the Fruitland coals were deposited nearly throughout the San Juan Basin area, the actual depositional process was a complex interaction of transgressive/regressive cycles of the seaway. In general, it was receding, it was a recessive motion. But there were short periods of transgression where the coal depositions were interrupted by back and forth movements of the cretaceous seaway.

In addition to that, there were points of erosion from channels and streams that meandered through the swampy areas that eroded the peat deposits in certain zones, and also, there's different types of vegetation that create variable deposition, thicker or thinner, and also, uneven compaction loads that cause thickening and

thinning of the coals zones that were subsequently performed.

Q. Have you prepared an exhibit that shows or demonstrates some of the discontinuity of some of the individual coal seams?

A. Yes. That would be Exhibit 13, I believe, that cross-section. This cross-section shows some of the variability in the coals. It's a cross section that contains three wells in a north/south direction, south being on the left where the letter "A" prime is.

The three wells that are shown here are showing two -- two formation tops are shown, the Pictured Cliffs zone on the bottom, the Fruitland Coal zone on the top.

The well logs that are shown on this cross-section are formation density logs where the gamma ray is on the left tract of -- it's on the left of the depth tract, and a bulk density curve is to the right of the depth tract.

The Fruitland Coal seams are identified by a red shaded area, and again, are based on a cutoff of 2.0 grams per cc as measured from the well log.

The total thickness of these three coal cross-section wells range from a low of 53 feet to the left to 74 feet on the right. You'll notice that some of the coal seams -- in particular, the lower coal unit, the basal

coal unit, seems to correlate across all three wells and it is a relatively consistent marker throughout the local area -- or the regional area for that matter.

But you'll also notice that some coal seams are seen in only two of the wells, seem to correlate across only two of the wells, some coals seem to seam only in one well.

Here's an example of one coal seam that does not seem to carry to the two end wells. This is visual example of how the coal seams -- there is a variable depositional pattern to these coal seams.

In addition to the termination of coal unit coal seams, there's also a higher complexity -- more complexity involved in it. The internal structure permeability of the coal is affected by changes in ash content, which is the noncarbonatious material that is often deposited with the peat, sands on silty material, and also in the natural content of the plant material.

Some of the material is more woody in content or resinous or waxy, and those two things can affect the gas content and the permeability of the coal, which in turn affects the production rate of -- the gas production from the coal units.

The middle bullet point on the geologic summary states the unpredictability of individual coal seam

thickness and the disconnected nature of some of the coal seams in the pilot project area cause significant variability in the volume of gas recovery. That would be this particular bullet point.

This discussion here ties into the production variability of the wells within the increased density pilot area.

The parent well cumulative production within the pilot area ranges from a low of .2BCF to 1.7 BCF. These parent wells were all drilled in the early to mid '90s. I think they were all drilled before 1995.

They were all completed in the same completion process. Individual coal zones were perforated and the well was fracture-stimulated, sometimes with multiple stages, but more than one stage.

The production variability is indicative of the coal variability in the sense that the coal's not connecting -- not being totally connected from well to well, and also in the differing coal -- physical properties of the coal which have a slightly higher gas content from one well to another and slightly different permeabilities from one well to another within the coal units.

In addition to the cumulative production, there's also a difference in the variability between the

parent and the increased density wells, the parent wells drilled in the pre-1995, the increased density wells drilled in the 2003 period.

The flow rates from individual wells within the increased density range from a high of 350 MCF a day down to a low of 30 MCF a day. Again, this variability is indicative of the differences in the coal thickness, the coal connectivity of the -- between wells and the physical properties of the coal.

By this discussion, a statement can be made that production variability does not support a conclusion that the Fruitland Coal reservoir is one, big connected tank; otherwise you would expect the individual wells to perform more evenly or have a more consistent production rate and cumulative production totals among wells in the same era.

And the last statement I'd like to make is the third bullet point, and it's based on the deposition and compaction history of the coals in the pilot project area. The proposed locations can be expected to lower abandonment pressures within individual coal seams and increase gas recovery and reduce waste.

Q. Mr. Baack, were Exhibits 11 through 13 prepared by you or under your supervision?

A. Yes, they were.

MR. DEBRINE: We would move for the admission of

these exhibits, Mr. Examiner.

HEARING EXAMINER: Okay, Exhibits 11 through 13 are admitted.

MR. DEBRINE: No further questions.

HEARING EXAMINER: I have no questions. Mr. Warnell?

MR. WARNELL: No questions.

HEARING EXAMINER: The witness may stand down. You may call your next witness.

ROBERT WRIGHT,

the witness herein, after first being duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. DEBRINE:

Q. Please state your name.

A. Robert C. Wright.

Q. Mr. Wright, who do you work for?

A. Koch Exploration Company, LLC.

Q. And how long have you worked for Koch?

A. Four years.

Q. And what are your duties with Koch?

A. Senior reservoir engineer.

Q. Have you previously testified before the Division?

A. Yes, I have.

Q. And were your credentials and testimony accepted in those proceedings?

A. Yes.

MR. DEBRINE: Mr. Examiner, we would tender Mr. Wright as an expert in petroleum engineering.

HEARING EXAMINER: Very good. He's so qualified.

Q. Mr. Wright, have you prepared a study with regard to the engineering aspects of this application that will assist the examiner in evaluating whether the application has merits?

A. Yes, I have.

Q. Would you please briefly discuss those conclusions for the examiner?

A. Yes, I'd be pleased to. I guess I'd like to start with reference to Exhibit 14. First to give an outline of my testimony give you a flavor of what you'll be seeing, I'll start with testimony that's of a qualitative nature that describes why we would anticipate incremental recovery from increased density.

This is going to be followed by a more quantitative analysis looking first at a fairly high level of all Fruitland wells in Township 29 9. There's 133 wells, parent and increased density wells that we will look at from a high level. This will be followed by a

more localized level looking at 23 wells in the pilot project area.

And then finally, we'll show some conclusions as to original gas and place data and overall recovery factors that demonstrate the poor yields within the pilot project area based on current spacing.

Q. Mr. Wright, is the presentation you're offering here today basically the same presentation that was made on March 31st for the BLM and OCD officials?

A. Yes.

Q. Go ahead and proceed.

A. Okay. If we move on to the qualitative discussion, Exhibit 15, the first three bullet points on this slide are taken from testimony in the June 2003 hearings that led to the current spacing rules that we have in both the high productivity and low productivity areas.

Specifically, a number of items referred to with Item 1 is Dr. Jeffrey Baumer's testimony from Burlington Resources, and items noted with 2 are Gary Krump's testimony from Devon Energy. These points that were made several years ago are still relevant to our current hearing.

And starting with the first bullet point, coal bed methane gas recovery is markedly different from a

conventional reservoir in that a very substantial portion of CBM gas recovery occurs at very low reservoir pressures.

Increased drilling will tend to reduce the average reservoir environment pressure which is critical to recovery. The lower the abandonment pressure, the more gas is liberated and produced. Even very small decreases in reservoir pressure can liberate significant quantities of gas.

With that, I will refer to the next draft, which is a comparison of a conventional reservoir in this pressure environment as compared to a CBM reservoir.

In red is what would show the pressure depletion characteristics of a conventional reservoir. In black is the CBM reservoir as defined by isotherm data that we were using in our analysis.

What is shown on the Y axis is the reservoir pressure ranging from 0 to 1,000 PSI. We are estimating the initial reservoir pressure for our area based on the average reservoir depth of below 2,200 feet at 895 PSI. That is based on a .4 PSI per foot gradient.

Initial reservoir pressures were not recorded when these wells were drilled, so we are utilizing an accepted gradient by the industry of .4 PSI per foot.

On the X axis it shows the percent of recovery

as the reservoir depletes. I'll point out that starting from 900 -- In a conventional reservoir, if you were to go to a 50 percent pressure depletion, that would be roughly around 450 PSI. The conventional reservoir would have depleted 53 percent of its reserves.

By comparison, a coal bed methane reservoir would have only recovered some 27 percent. A further reduction of pressure to 73 percent would result in 50 percent depletion in a coal bed methane reservoir as compared to 75 percent in a conventional reservoir.

So this is highlighting that a really substantial amount of potential reserves remain at very low pressures, below 250 PSI..

I might point out that we anticipate that with good reservoir management, we would hope to see an abandonment pressure somewhere in the range of 100 PSI, which on the isotherm data that I'm presenting would result in an overall recovery factor of about 75 percent in this area.

If we go back to the prior slide, some other qualitative points would be that even if you were dealing with a homogenous design, additional gas would be recovered through increased density drilling. Again, that's primarily due to lowering the abandonment pressure.

And as Mr. Baack testified a few minutes ago,

the Fruitland Coal is certainly not a homogenous zone, so we would anticipate that there would be other factors that would lead to additional recovery which are Bullet .3, that incremental gas would be recovered from zones not intercepted by existing wells, from zones not effectively in communication with existing wells or from pockets within producing zones that are isolated by permeability restrictions.

The final point I'd make on Exhibit 15 is that the incremental reserves that would be recovered through increased density would prevent waste and they do represent a very valuable resource.

With that we'll move to the quantitative discussion starting with Exhibit 17. What we'll show in the next couple of graphs are actual results to date from 133 Fruitland wells in Township 29 9.

Of the 133 wells, 69 are original parent wells, and then in addition, 64 wells are increased density wells beginning with their development in June 2003.

Skipping to the next graph, Exhibit 18, this is a rate/time graph. We have rate platted on the Y axis MCF per day. On the other Y axis we have a producing well count shown in black and water rate associated with the wells in blue. The solid red line shows the entire history of the parent wells.

As I mentioned, there are 69 wells in total that are depicted under this curve. And the well count that is associated are solid black diamonds. They're this curve shown here. The other curve, a red dashed line, are the -- you see the rampup of the production of the increased density wells as the dashed red line. And the associated well count are hollow blank diamonds.

And then water production is shown in blue diamonds in solid for the parent wells. A little bit hard to see here, but the ones that are not filled in in blue are water associated with the increased density wells.

What you see from the parent wells is a ramping up in production and continued to ramp up even as the well count reached its current level of 69 wells.

There was still a slight inclination of production up until very recently within about the last perhaps year and a half or so. The parent wells are now on a very, very modest decline of around 1 per.

Just looking at this particular slide, there's -- I would have difficulty seeing that there are -- is any effect from the offsetting increased density wells that were drilled. I'm not seeing signs on this level of any type of interference.

And with that, I might refer to the next exhibit, Exhibit 19. On this one we've removed the well

count and water production and are showing only the parent well production and the increased density well production.

What has been included in this is a solid black line. This is a hypothetical line that would represent if 25 percent of the production from the increased density wells had come at the expense of the parent wells; that would be the black line that would result showing a significant decline in trend and a big gap between actual and the hypothetical.

Clearly, we have not seen this to date, and again, that reinforces my position that based on this analysis, it's very difficult to see any degree of interference between the parent and increased density wells.

Moving on to Exhibit 20, we will now go into a more localized review of the pilot project area, a very similar type of analysis evaluating -- Moving to the next page. This is 12 parent wells shown in the solid red color and 11 of the increased density wells as a dashed line in red. And again, we see very similar performance in a more localized level as we saw for the entire township.

And again, skipping to Exhibit 21, I have added the inclusion of a hypothetical line with 25 percent interference that again, we're not seeing that affect on

the parent wells.

So again, from a more localized level in the vicinity of the pilot wells, again, I don't see evidence of interference.

The next thing I'd like to refer to is Exhibit 22. And from here we're going to go into more depth looking at the specific performance of the four parent wells within the pilot project area to see if we can discern any level of interference in a very detailed level map.

And with that, let's skip to the next slide, Exhibit 23. Again, we have some rate/time plats. I think perhaps in your hard copy -- I'm not quite sure what the -- well, the scale shown in MCF to date appeared as a black rectangle which should show there's some MCF per day on the Y axis.

And these are rate/time plats as we looked at previously on the higher levels. You have the parent wells shown in the red. There are two dashed curves that are associated with the parent well. One is a blue dashed curve that would be an extrapolation of data prior to the infill wells being drilled.

A red dashed line would be a more current extrapolation based on the most current data that would take into account the post-increased density well period.

The other things that appear on these graphs are the offset increased density wells in black, blue, I think an orange color, and I think -- well, I'm losing my definition on colors here. But anyway, there's up to four offsetting increased density wells for each of the four parent wells.

HEARING EXAMINER: The orange and red turned out to be about the same color.

THE WITNESS: Yes. They're pretty close, I know.

HEARING EXAMINER: The first time I was going to tell you I didn't see the dashed blue line, but the reason is because -- the lower right, it's very close to the dashed red line.

THE WITNESS: Yes.

A. But the conclusion on three of these is that the blue and red dashed focus that I made basically overlie each other.

So a clear conclusion from these three wells is no interference effects are being seen as an adverse performance impact on the parent well.

We do see a slightly different result on the lower right one which is the Koch Exploration Aggie State 32-1, although I do not believe that that is a result of interference, as I will explain.

If we go to Exhibit 24, this will give a more detailed view of this. The blue dashed line, again, extrapolated back to this sort of data is how that was arrived at.

And then the red dashed line -- actually a little bit difficult to fit -- a best fit to this, there was a bit of a downturn in production followed by more of an uptake in production. In fact, our production levels are now back to this blue dashed line.

This well is noted from the production rates, the highest rate seen on the well is probably on the order of 50 to 60 MCF per day. Quite a poor well in comparison to other wells in the pilot area.

You can see that the offsetting increased density wells are in fact substantially better than the parent well in this particular case. Because of this well being a rather poor well, we believe it's some of the factors of the adverse performance that we seem to be seeing that seem simultaneous with the onset of production from the increased density wells may be caused by factors such as compressor limitations.

We have a small enough unit on this that we typically cycle gas through our other wells. In this case, the compressor limits us in doing that. And that can cause a certain amount of water loading to occur that

may have some adverse impact and affect only the production levels.

Also, because it's a rather poor producer, we had less active field supervision on this well than we do some of our better producers.

On weekends, for example, if the compressor were to shut down for some reason, we don't send a field technician to go back and restart the well on a weekend. It's not advantageous from an economical perspective to do that.

And then as I pointed out earlier, the well in fact now has come back to rates that basically now are fitting the pre-increased drilling forecast.

So my conclusion on this is that although you see some slight separation here between the red dashed line and the blue, I don't believe it's due to interference.

And so the overall conclusion of this portion of the analysis is that whether we're looking at the whole of Township 29 9 or the more localized and detailed review of the pilot project area, I'm not seeing evidence of conclusive interference.

The next thing I'd like to get into is working in the direction of establishing a regional gas-in-place instruments and ultimately arriving at overall recovery

factors for the parent and increased density wells.

To do that, we need to examine some sorption -- as received sorption isotherm data that we had available to us that we utilized in our examination.

We had a total of nine samples from five wells in the vicinity of the pilot area. I'll be showing a map of the general location of these five wells in relation to the pilot project area in a moment. But we'll go ahead and skip to the isotherm graph next.

And this is Exhibit 26. In the key down at the bottom there, we identified the wells as Wells A through E. And then generally there's anywhere from one to two samples in each of these five wells.

For the case of a -- of the first sample of the well, it would be denoted as a solid colored curve, such as this one on the low end, or there's this solid red curve, solid purple line, and so on. Those would be representative of the first sample that was available to us.

If there is a second sample, it would be noted as a long dashed line; and then there is one that had two samples as a shorter dashed line.

Now, what's represented here are the actual data as analyzed by the laboratory. They are a little hard to see on the screen, but there are small symbols that

reflect the actual data points. The solid curves or the curves without the data points are defined by the coefficients that the laboratory measured.

The next slide shows the general location of these five wells to the pilot project area. This in yellow is the pilot project area. The furthest well that we had data is roughly 11 miles away, and you can see we actually had a well within the pilot project area.

So again, we're no more than 11 miles at the furthest point -- one point in the pilot project area, and the other points being in the 3 to 6 mile range from the project area.

And the next thing that I'll show you is how we arrived at our gas content that we've used in the original gas-in-place calculations.

If you skip to Exhibit 29, this is a very similar plot of the same isotherm data that we've already looked at, but rather than showing the data points for specific wells and their linear coefficients are the resulting isotherms from the linear coefficients. I've plotted all the data on one curve.

And then from there what I did is I developed a low side case, a high side case, and a most likely case. The low side case shown in red is -- What I did is, I used linear coefficient that matched the lowest data points.

For the high side case, I developed linear coefficients that matched the highest data points.

HEARING EXAMINER: Now, is this graph in --

THE WITNESS: Exhibit 29.

HEARING EXAMINER: Okay. Go a head.

A. The curve in black, the most likely case is based on linear coefficients that is essentially right in the middle. For our evaluation, we have chosen to use the low side case, which for our reservoir pressure of 895 PSI -- again as I mentioned earlier, based on .4 PSI per foot for our average reservoir datum of 2209, would result in a gas content of 186 SCF per ton. And that is the data we used in our evaluation for original gas in placement.

Next, moving to Exhibit 30, we begin our discussion of original gas in place and recovery factors for the parent and increased density wells.

The next thing I'd like to show you would be our original gas-in-place estimates on Exhibit 31. Actually, it will be in table -- Let me refer to Exhibit 31 first, which is a map that is kind of a key to Exhibit 32.

This shows our pilot project area and each of the spacing units within the pilot project area. This is a key that will help you in looking at the next table, Exhibit 32.

This table shows how we've arrived at original

gas in place. We start from the basic definition of original gas in place for a coal bed methane reservoir, which is a function of this constant times area, the thickness of the coal, in situ density, and then the in situ gas content.

So the table, we start with the spacing units labeled from A to L. And I'll point out that L has an asterisk on it, which is to denote that in this particular spacing unit, only the original parent well was drilled to date.

The increased density well has been applied for by West Largo. As I understand, they have a permit that's been granted and they're going to be drilling it soon. But because that well has not yet been drilled, we attribute only half of the spacing unit, 153 acres associated with that spacing unit since the increased density well has not yet been drilled.

The spacing unit size is shown in the next column. Several of the units are standard-sized units at 320 acres. Some of them are slightly smaller, the smallest being at 288 acres for Spacing Unit E..

The next column shows the Fruitland Coal thickness, and this was based on the map that Mr. Baack showed earlier. The range and thickness, the lowest data points at 53 feet in Spacing Units J and K at 53 feet, and

then going to a high of 76 feet in spacing unit feet.

The next column is the in situ density that we've used in the calculation. Again, this is based on map data from Mr. Baack.

The next column is using the 186 SCF per ton, but we have adjusted it based on depth. Where you see values less than 186, that means that the reservoir at that spacing unit is at a shallower depth than the average reservoir data of 2209.

And on the south end, you see some values that are higher than 186, 194 in Spacing Units J and K. This would indicate that those spacing units have a relatively higher -- or deeper depth associated with those spacing units.

Using the formula that I referred to previously for each of these spacing units, we can then arrived at a gas in place for each spacing unit. In totaling that for the summation or the pilot project area is 98 BCF in place, which works out to an average of 8.6 BCF for 320 acres.

The next thing we'd like to move to is going to be Exhibit 33, the methodology that I've used to establish the ultimate recoveries for parent and increased density wells.

The first bullet point I'll refer to indicates

that there were some issues that made this somewhat problematic in trying to assign EURs for each well.

One of the wells I referred to here is BR's Hamner 9. In fact, that's Conoco Phillips' well. I apologize for not catching that.

That parent well, along with seven of the increased density wells, are currently reflecting an inclining production volume. The balance of the other wells have very nominal inclines, something probably less than 3 percent.

So my approach was -- I used the same approach on all wells in assigning EURs. And I did it in three ways. I assigned a low side, a most likely, and a high side EUR.

There's a lot of verbiage here that -- I'll read the verbiage and then the following graph will explain it as a picture.

But for the low side case, I honored whatever the current trend was for two years. So if you had a well such as the Hamner or the seven wells that are showing inclining production, I maintained that inclining production for a two year period.

If it was the on decline, then I would honor that trend. And then after two years, if it switches to a 3 percent decline for two years, it's followed by a 5

percent decline after three years. And then a limiting 10 percent decline thereafter to an economic limit of 450 MCF per month.

The most likely case is very similar to the low side case, but instead of limiting us to a 10 percent decline, I used a 7 1/2 percent decline as showing a decline.

And then finally, the high side case, all the same parameters except for using -- capping it at no more than a 5 percent decline. At this point, I think it would be easiest to look at Exhibit 34. That will give a pictorial view of what we're describing.

Okay, this is -- the EUR methodology is referred to for a specific well. The Energen Federal 29 9 28 2S, would have been an increased density well. In solid red is the history of that well. It began in early 2006. As you can see, this well is on an inclining trend.

So for all cases, the most likely, the high side and low side, I honored that trend for two years. Then we go to a 3 percent decline, slightly steepen it to 5 percent, and then this is where the deviation occurs between the pre EUR methods.

The low side case has the 10 percent decline, the most likely case at 7 1/2 percent, and the high side case of 5 percent.

If we go back to Exhibit 33, after analyzing all the wells in this manner, I concluded that my most likely assessment was the best ones to use for our recovery calculations.

And some of the primary reasons behind why I felt that was the case, is that the most likely forecast results in a reserve-to-production ratio of about 15.

In this, when we go over to an R over P ratio, in this case, you have the R being the gross remaining reserve in the denominator, the P factor would be an average 12 month production, what it's done in the past 12 months. If you hold that production constant, it will arrived at an R over P ratio of about 15. And this is consistent with industry reserve lives in the Rocky Mountain region.

If you look at public data from companies who report this type of data in the Rocky Mountain region, this would be a very consistent result for an expected reserve life.

Now, keep in mind that an R over P ratio of 15 does not represent an actual reserve life. Because the P in the denominator is going to decline over time. In actuality, a reserve life with an R over P ratio of 15 would generate a reserve life for this group of wells in the range of 35 to 45 years from this point going forward.

Now, keep in mind that the parent wells have been on production since 1990, nearly 20 years of production, so that my most likely forecast is suggesting a reserve life from inception for parent wells of in the 55 to 65 year range. So it's -- I believe it's giving it a very reasonable reserve life for these wells.

So we've used these most likely EUR results and we can now add those to the original gas-in-place table, first for the parent wells, then for the increased density wells.

Moving on to Exhibit 35, the left-hand portion is in the same table we looked at earlier which is the original gas in place. We had 98 BCF in total.

To that we've added four columns for the parent wells. The first column is cumulative production to date which is about 13.6 BCF for the 12 parent wells. The gross remaining reserve column that shows up next is the result of the EUR methodology that I just explained that would suggest that there is 13 BCF remaining for this group of wells, approximately the same amount that has been produced to date.

And then the next column shows the R over P ratio for each of the wells with an average of 14 for the group. Adding the individual cum production and gross remaining reserve together arrives at an EUR for each well

that in total represents 26.6 BCF.

If we divide that EUR recovery by the gas in place, that would suggest that the parent wells would recover 37 percent of the original gas in place.

We follow a similar methodology for the increased density wells which is shown on Exhibit 36. Again, building on the table we had from before, we have the gas-in-place figures, the EUR for the parent wells, and highlighted in the black rectangle would be the results for the increased density wells.

Again, we have cumulative production, the remaining reserve that I've assigned to each well, an R over P ratio, which for this group of wells is slightly higher, around -- approaching 18, 17.6.

And the EUR that results for this group of wells is 14 BCF, which is around 14.3 BCF, 14.3 percent of the original gas in place. If we combine the results of the overall EURs for parent and increased density wells, the results on these final two columns to the table, that would show an overall recovery of 4.6 BCF representing only 41 percent of the original gas in place, far short of the 75 percent that I alluded to -- From when we looked at the isotherm data from a CBM recovery is that this is clearly substantially less and I feel that would reflect the overall poorer recovery that we are seeing based on

current spacing.

The next thing I'd like to point out on Exhibit 38 are some reasons that we believe our analysis is actually in fact very conservative. In particular, the gas in place that we have used, it is based on the low side gas content that I mentioned, the 186 SFC per ton.

We could have chosen to use the most likely case or high side case. We decided to be conservative and that's resulted in a conservative original gas-in-place estimate.

Also, we are using a density cutoff of 2 grams per cubic centimeter as highlighted in -- by these references that are shown on the bottom portion here.

There are a number of industry references that cite that low quality coals above 2 grams per CC do in fact hold gas. Another point is that the current isotherm data that we utilized, they're based on pure methane.

Now, the gas that we produce out of here does contain some heavies, such as carbon dioxide, methane, propane and some other smaller quantities of other heavies.

The point about these heavies is that in looking at the next graph, you have -- This is a thinner sorption affinity of sorbates, methane being the one our isotherm data is based on shown in green.

Q. And you're referring to Exhibit 39?

A. Yes, that's correct. Some of the heavies have a stronger sorption characteristic, such as ethane shown here, substantially higher sorption than methane. Propane, similar. And we have CO2 here and propane here.

If you're able to analyze isotherm data taking into account the average reservoir properties of the gas being produced, it would then account for more gas than what is shown on a pure methane basis.

There are some practical issues on trying to measure isotherms with these heavies because of factors such as -- well, in trying to do the analysis, some of these would become a liquid at relatively low pressures and it becomes problematic in trying to account for it.

But from a qualitative standpoint, the expectation would be that there would be more gas if we were able to do an analysis of isotherm that would account for the heavies.

Going back to Exhibit 38, the other thing I'd point out is that, again, we've referred to the gas-in-place estimates based on .4 PSI per foot as an initial reservoir pressure gradient.

There's one reference that we found that had cited that there may be pressures in the basin where the original pressure could be at a higher pressure gradient

than .4 PSI per foot. And in fact, part of the pilot project area is located in one of these areas that we felt that it might in fact have been a higher pressure. That would have resulted in more gas in place.

So again, the conclusion here is that our analysis, we believe, has been very conservative, particularly in respect to gas in place.

The last exhibit I'd like to refer you to is Exhibit 40. And this is an analysis of increased-density well economics which will show that the incremental reserves associated with increased density is a valuable resource.

We start off with gas price starting from a 12 month NYMEX strip price from last month, which was around $5. There's a number of adjustments that are made and we get down to a net price at the least level at $3.79 per MCF.

If we apply that price to an average EUR of the increased density wells, which is 1,276, it would result in a gross revenue for each location of around $4.8 million.

Subtracting out royalties, production and ad valorem taxes, operating costs of $1.05 per MCF and the drilling costs at $400,000, would result in a net revenue for each location of $1.8 million.

The next thing on an economic result perspective for the average of the 1,276 million cubic feet would be a rate of return of about 20 percent, net present value at 10 percent of 366,000.

Now, to account for possibly lower recoveries than the 1,276, the average EUR of the increased density wells to date are some sensitivities at 80 percent, 70 percent and 60 percent.

So even at 60 percent going to 766 million cubic feet, would still result in a greater return of nearly 19 percent and $235,000 on a discounted basis.

So the conclusion is that we are looking at economical wells.

Mr. DEBRINE: That concludes our presentation, Mr. Examiner. We only have one other exhibit, which is our notice affidavit regarding the application.

We are asking in the application and consistent with Exhibit 4 of the discussions that we have had with the BLM that the Division grant the pilot project and allow a three year period for the pilot study from the date of the order with annual reporting at the local level to the BLM and the Division concerning the results of the investigation that will reveal through the study.

HEARING EXAMINER: Okay. Are you tendering you remaining exhibits then?

MR. DEBRINE: Yes. We would ask that you admit Exhibits 14 through 41.

HEARING EXAMINER: Exhibits 14 through 41 are admitted. And I have no questions. Mr. Warnell?

MR. WARNELL: That was quite a presentation. I feel that I know a lot more about the Fruitland Coal now than I did and I used to log it as a young engineer. I have no questions.

HEARING EXAMINER: Very good. If there is nothing further, then Case No. 14395 will be taken under advisement.

MR. DEBRINE: Mr. Hearing Examiner, we would ask that we prepare a proposed order for the Division concerning this matter, and if we could have ten days to do that?

HEARING EXAMINER: That will be acceptable.

MR. DEBRINE: Thank you.

I hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 14395. heard by me on 4-16-2009.

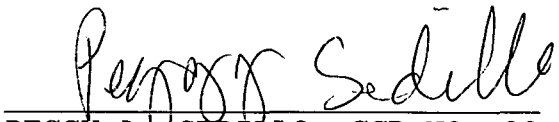
David K. Brooks Examiner
Oil Conservation Division

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

REPORTER'S CERTIFICATE

I, PEGGY A. SEDILLO, Certified Court Reporter of the firm Paul Baca Professional Court Reporters do hereby certify that the foregoing transcript is a complete and accurate record of said proceedings as the same were recorded by me or under my supervision.

Dated at Albuquerque, New Mexico this 25th day of April, 2009.



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